

IN THE CLAIMS

This listing of the claim will replace all prior versions and listings of claim in the present application.

Listing of Claims

Claims 1-6 (canceled).

7. (currently amended) A data transmission method for information data containing additional information data therewith, comprising, at a transmitter side, following steps:

a step for preparing data frames of said information data into which the additional information data are to be embedded;

a step for altering at least part of each of the data frames in accordance with predetermined ~~patters~~ patterns corresponding to the additional information data to be embedded, as an electronic watermark, repetitively and separately at different positions in the data frames, for the plural continuous frames; and

a step for transmitting the information data of the data frames embedded at different positions in said data frames repetitively and separately with the additional information data.

8. (currently amended) A data transmission and reception method for information data containing additional information data, comprising, at a transmitter side, following steps:

a step for preparing data frames of said information data into which the additional information data are to be embedded,

a step for altering at least part of each data frame in accordance with predetermined patterns corresponding to the additional information data to be embedded, for the plural continuous frames, repetitively, and

a step for transmitting the information data embedded with the repetitive additional information data therein; and

further comprising, at a receiver side, following steps:

a step for receiving the transmitted information data embedded with the repetitive additional information data therein,

a step for detecting the repetitive additional information data embedded from said transmitted information data, and

a step for determining said additional information data based on continuity of the repetitive additional information data detected for a predetermined times.

9. (currently amended) A data transmission and reception method as claimed in claim 78, wherein said information data includes at least one of video data, audio data and text data.

Claims 10-15 (canceled).

16. (currently amended) A data transmitting apparatus for transmitting information data containing additional information data therewith, comprising:

first means for preparing data frames of said information data into which the additional information data is embedded, as an electronic

watermark, repetitively and separately at different positions in said data frames;

second means for altering at least part of each of the data frames in accordance with predetermined patterns corresponding to additional information data to be embedded at different positions in said data frames repetitively and separately therein for the plural continuous data frames; and

third means for transmitting the information data embedded at different positions in said data frames repetitively and separately with the additional information data.

17. (currently amended) A data transmitting apparatus as claimed in claim 16, wherein said third means includes means for recording the information data repetitively and separately embedded at different positions in said data frames with the additional information data onto an optical information recording medium.

18. (previously presented) A system comprising:

a data transmitting apparatus for transmitting information data containing additional information data therewith; and

a data reproducing apparatus for reproducing the transmitted information data transmitted by the data transmitting apparatus,

wherein said data transmitting apparatus comprises:

first means for preparing data frames of said information data into which the additional information data are embedded,

second means for altering at least part of each of the data frames in accordance with predetermined patterns corresponding to additional information data to be embedded, for the plural continuous frames, repetitively, and

third means for transmitting the information data embedded with the repetitive additional information data therein, and

wherein said data reproducing apparatus comprises:

first means for receiving the transmitted information data embedded with the repetitive additional information data therein,

second means for detecting the repetitive additional information data embedded from said transmitted information data, and

third means for determining said additional information data based on continuity of the repetitive additional data detected for a predetermined times.

Claims 19 and 20 (canceled).

21. (currently amended) An information recording medium for recording data therein, comprising:

information data being reproducible; and

additional data embedded, as an electronic watermark, repetitively and separately at different positions into said information data and being encoded in accordance with a predetermined conversion table.

22. (previously presented) An information recording medium as claimed in claim 21, wherein information, relating to a repetition number

indicating the number of times said additional data is repetitively and separately embedded in said information data, is recorded into a part of said information recording medium.

23. (currently amended) An information recording medium for recording data therein, comprising:

information data being reproducible in the form of plural continuous data frames; and

data repetitively and separately embedded, as an electronic watermark, at different positions in said information data of said plural continuous data frames, and being altered in accordance with predetermined patterns corresponding to additional information data.

24. (previously presented) An information recording medium as claimed in claim 23, wherein information, relating to a repetition number of said continuous data frames of the information data, into which said data is repetitively and separately embedded, is recorded into a part of said information recording medium.

25. (previously presented) An information recording medium according to claim 21, wherein said information data is video data.

26. (previously presented) An information recording medium according to claim 21, wherein said information data is audio data.

27. (previously presented) An information recording medium according to claim 23, wherein said information data is video data.

28. (currently amended) An information recording medium according to claim 21, wherein said data repetitively and separately embedded at different positions in said information data is identification information data.

29. (currently amended) An information recording medium according to claim 23, wherein said data repetitively and separately embedded at different positions in said information data is identification information data.

30. (currently amended) An information recording medium according to claim 21, wherein said data repetitively and separately embedded at different positions in said information data is control information data.

31. (currently amended) An information recording medium according to claim 23, wherein said data repetitively and separately embedded at different positions in said information data is control information data.

32. (previously presented) A data transmission and reception method as claimed in claim 8, wherein said information data includes at least one of video data, audio data and text data.

33. (previously presented) An information recording medium according to claim 23, wherein said information data is audio data.